

REMARKS

Claims 2 and 14 are amended. Claims 1-14, as amended, remain in the application. No new matter is added by the amendments to the claims.

The Rejections:

In the Office Action dated January 23, 2006, the Examiner rejected Claims 1-14 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated that, more specifically, Claim 1 is vague and indefinite because it is unclear as to what qualifies as a "flat-belt-like" support and Claim 2 is vague and indefinite because it is unclear as to what qualifies as "substantially" triangular and trapezium shaped.

The Examiner rejected Claims 1-4, 7, 9, 13 and 14 under 35 U.S.C. 103(a) as being unpatentable over Baranda (WO 99/43589) in view of Heinz (2003/121729).

Referring to Claims 1-4, 13 and 14, the Examiner stated that Baranda discloses an "Elevator System Having Drive Motor Located Between Elevator Car and Hoistway Sidewall" as claimed (See Figs. 1-8 and respective portions of the specification) and further discloses a drive motor (42) mounted at a head of an elevator shaft and having a drive pulley; an elevator car (16) movable in the elevator shaft; a counterweight (48) movable in the elevator shaft and arranged laterally of the elevator car (See Pg. 2 - Pg. 3 l. 17 & Fig. 2); and a flat-belt-like support means supporting the elevator car by under looping and engaging the drive pulley. The Examiner admitted that Baranda does not disclose the support means being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the support means. The Examiner noted that Heinz discloses a "Lift Belt and System" as claimed (See Figs. 1-4 and respective portions of the specification) and further discloses a flat belt support means (10) being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the support means (See Fig 1), and further discloses ribs and grooves that are substantially triangular and trapezium shaped in cross section (See Fig. 1). The Examiner noted additionally that Heinz discloses wherein the ribs and grooves are formed with lateral flanks at an angle in a range

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between 80° to 100° and approximately 90° (See Sect. 0026) and, therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include the teachings of Heinz and include a wedge-ribbed belt that contained ribs and shaped and angled grooves so that the belt could provide greater traction capability and a higher lift capacity the elevator system.

Referring to Claim 7, the Examiner stated that Baranda does not disclose that the drive pulley has an external diameter in a range of 70 to 100 millimeters. According to the Examiner, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include drive pulleys that were in the range of 70 to 100 millimeters so that greater torque and lifting capacity could be achieved.

Referring to Claims 9-10 (Applicants note that Claim 10 is not listed in the rejection), the Examiner stated that Baranda discloses that the drive motor and drive pulley are mounted in a space which lies between one side of the elevator car, when the elevator car is standing in an uppermost position in the elevator shaft, and an adjacent wall of the elevator of the elevator shaft and an axis of the drive pulley is arranged horizontally and parallel to the one side of the elevator car (See Fig. 2). The Examiner noted that Baranda further discloses a belt connected at one end of the side of the elevator car at a first support means fixing point (104), which extends from the first support means fixing point vertically upwards to a side which faces the elevator car, of a periphery of the drive pulley, loops around the drive pulley by 180 and then runs vertically to a second support means fixing point (102) at the counterweight (See Fig. 3). The Examiner admitted that Baranda does not disclose that the belt connected at one end of the elevator is a wedge-ribbed belt; but stated that it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda an implement an wedge-ribbed belt as taught by Heinz for reasons as discussed above.

The Examiner rejected Claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Baranda in view Heinz and in further view of Danhauer (2002/0098935). The Examiner admitted that Baranda does not disclose a wedge-ribbed belt that has a plurality of transverse grooves formed on the running surface or at least two wedge-ribbed belt strands arranged in parallel. The Examiner stated that Danhauer discloses a "Fabric Cushion V-Ribbed Belt" as claimed (See Figs. 1-2 and respective portions of the specification) having a belt (10) with a

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plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2), the belt (10) is provided with a plurality of transverse grooves (34) (See Sect. 0025), and, additionally, the belt (10) has at least two wedge-ribbed belt strands arranged in parallel (See Figs. 1-2). According to the Examiner, it would have been obvious to a person of ordinary skill in the art to modify the apparatus of Baranda to include the teachings of Danhauer and provide a wedge-ribbed belt with a plurality of ribs and grooves formed in the running surface as well as transverse grooves and ribbed strands that so that the belt could provide better traction, increased flexibility, and a higher load capacity.

The Examiner rejected Claim 8 under 35 U.S.C. 103(a) as being unpatentable over Baranda in view Heinz in further view of Bauer (2002/0185338). The Examiner admitted that Baranda does not disclose that the drive motor and drive pulley are mounted on a drive bracket attached to at least one guide columns. The Examiner stated that Bauer discloses a "Rope Elevator" as claimed (See Figs. 1-4 and respective portions of the specification) having a drive motor (14) and a drive pulley (13) are mounted on a bracket attached to at least one of the guide columns (See Sect. 0017 & Fig. 2). According to the Examiner, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Bauer to include the teachings of Bauer and provide a bracket so that the drive motor and drive pulley could be mounted together so that when forces were exerted as a result of the elevator they would not be loaded on the walls.

The Examiner rejected Claims 11 and 12 under 35 U.S.C. 103(a) as being unpatentable over Baranda in view Heinz in further view of Mori (2002/0112924). The Examiner admitted that Baranda does not disclose a belt transmission means for coupling the drive motor to the drive pulley or that the belt transmission means includes at least one cogged belt and a wedge-ribbed belt coupling the drive motor to the drive pulley. The Examiner stated that Mori discloses a "Elevator Apparatus" as claimed (See Figs. 1-22 and respective portions of the specification) having a belt transmission means coupling the drive motor (52) to the drive pulley (51) (See Sect. 0040 & Figs. 1,19). The Examiner noted that Heinz discloses a belt transmission means (10) coupling the drive motor to the drive pulley in which the belt (10) used consist of a wedge-ribbed belt (See Fig. 3). According to the Examiner, it would have been obvious to a person of ordinary

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skill in the art at the time of the invention in view of Heinz and Mori to provide a belt transmission that coupled the drive motor and drive pulley that consisted of a cogged belt and a wedge-ribbed belt. It would have been obvious to use a cogged and wedge-ribbed belt so that the elevator could benefit from an increased load capacity and better traction.

The Response:

The Examiner stated that Claim 1 is vague and indefinite because it is unclear as to what qualifies as a "flat-belt-like" support. The term "flat-belt-like support means" is explained beginning on Page 1, at line 21 through line 5 on Page 2 of the specification. Examples of "flat-belt-like support means" according to the present invention are shown in Figs. 3 and 4.

The Examiner stated that Claim 2 is vague and indefinite because it is unclear as to what qualifies as "substantially" triangular and trapezium shaped. Applicants amended Claims 2 and 14 to remove the term "substantially".

All of the rejections under 35 U.S.C. 103(a) are based upon the combination of Baranda with Heinz. However, Heinz is not prior art since the January 2, 2002 filing date is subsequent to Applicant's EP priority date of November 23, 2001. Therefore, the rejections of Claims 1-14 based upon the combination of Baranda with Heinz should be withdrawn.

In view of the amendments to the claims and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.